

AMENDMENT

In the Claims:

Please amend the claims as follows:

1. (Currently Amended) A voltage-controlled tunable filter including:
an input;
an output;
a plurality of resonators serially coupled to each other and to the input and the output;
a plurality of tunable capacitors, each of the tunable capacitors being coupled to one of the resonators;
said tunable capacitors comprising, a first electrode; a tunable dielectric film positioned on the first electrode; and a second electrode positioned on a surface of the tunable dielectric film opposite the first electrode; and
means for coupling non-adjacent ones of the resonators.
2. A voltage-controlled tunable filter according to claim 1, wherein each of the resonators includes one of:
a microstrip, a stripline, a coaxial line, a dielectric resonator, or a waveguide.
3. A voltage-controlled tunable filter according to claim 1, wherein the means for coupling non-adjacent ones of the resonators comprises a series connection of an additional tunable capacitor and a conductor.

4. A voltage-controlled tunable filter according to claim 1, wherein the plurality of resonators are mounted on a substrate.

5. Canceled

6. (Currently Amended) A voltage-controlled tunable filter according to claim 51, wherein the tunable dielectric film comprises:

barium strontium titanate or a composite of barium strontium titanate.

7. A voltage-controlled tunable filter according to claim 1, wherein each of the tunable capacitors comprises:

a substrate;

a tunable dielectric film positioned on the substrate; and

first and second electrodes positioned on a surface of the tunable dielectric film opposite the substrate, the first and second electrodes being separated to form a gap.

8. Canceled

9. Canceled

10. Canceled

11. Canceled

12. (Currently Amended) A voltage-controlled tunable filter according to claim 1, wherein the input includes a first microstrip line having an end capacitively coupled to a first one of the resonators; and wherein the output includes a second microstrip line having an end capacitively coupled to a second one of the resonators.

13. A voltage-controlled tunable filter according to claim 1, wherein each of the resonators comprises a microstrip line.

14. A voltage-controlled tunable filter according to claim 13, wherein the microstrip lines are positioned parallel to each other on a substrate.

15. A voltage-controlled tunable filter according to claim 13, wherein the coupling means comprises:

an additional microstrip line having first and second ends, each capacitively coupled to one of the resonator microstrip lines.

16. A voltage-controlled tunable filter according to claim 15, wherein coupling means further comprises:

an additional tunable capacitor connected in series with the additional microstrip line.

17. A voltage-controlled tunable filter according to claim 1, wherein each of the tunable capacitors comprises a tunable dielectric capacitor including a layer of voltage tunable dielectric material.

18. (Currently Amended) A voltage-controlled tunable filter according to claim 1, wherein the ~~layer of~~ tunable dielectric film ~~material~~ comprises a material selected from the group of:

$Ba_xSr_{1-x}TiO_3$, $Ba_xCa_{1-x}TiO_3$, $Pb_xZr_{1-x}TiO_3$, $Pb_xZr_{1-x}SrTiO_3$, $KTa_xNb_{1-x}O_3$, lead lanthanum zirconium titanate, $PbTiO_3$, $BaCaZrTiO_3$, $NaNO_3$, $KNbO_3$, $LiNbO_3$, $LiTaO_3$, $PbNb_2O_6$, $PbTa_2O_6$, $KSr(NbO_3)$ and $NaBa_2(NbO_3)_5KH_2PO_4$, and compositions thereof.

19. (Currently Amended) A voltage-controlled tunable filter according to claim 18, wherein the ~~layer of~~ tunable dielectric film ~~material~~ further comprises a non-tunable component.